

nih record



ABOVE • NIH'ers have been generous again this summer in supporting Feds Feed Families. See story on p. 12.

features

NIDA Scientist Reviews Pros, Cons Of Marijuana Use

NIH Helps Build Research Capacity In Africa

Leaders Advise on Advancing Women in Science Careers

NIH'ers Help Feed the Hungry

departments

Briefs 2
Digest 9
Milestones 10
Feedback 11

NIDA's Huestis Warns of Adverse Cognitive Effects of Marijuana; Some Therapeutic Uses Seen

By Dana Steinberg

A Lipsett Amphitheater full of eager attendees listened intently, some of them perhaps hoping to hear validating evidence of the merits of marijuana. But the jury's still out: while marijuana has some therapeutic potential, more research is needed. What we do know, said Dr. Marilyn Huestis, chief of the chemistry and drug metabolism section at the National Institute on Drug Abuse, is that the harmful effects of marijuana last longer than you may realize. The primary psychoactive chemical in marijuana, Δ -9-tetrahydrocannabinol (THC), is stored in the body after chronic, frequent marijuana use.

The national debate over marijuana's safety rages on. Medical marijuana is legal in 23 states and the District of Columbia. This year, Colorado and Washington legalized marijuana outright. About 12 percent of Americans age 12 and older reported

SEE **MARIJUANA**, PAGE 6



NIDA's Dr. Marilyn Huestis discusses potential therapeutic uses, and dangers, of marijuana.

Idea Mapping Can Help People Be More Creative, Nast Says

By Eric Bock

Diagrams that use words, color and pictures to organize information can help people be more creative and plan more efficiently, said author



Author Jamie Nast

Jamie Nast at a Deputy Director for Management Seminar in Masur Auditorium recently.

"Idea mapping is a powerful whole-brained visual thinking tool that enhances memory, note-taking skills, thought organization, planning, creativity and communication," said Nast, co-founder of NastGroup.

Based on Roger Sperry's "split brain" research, it was discovered that the brain's left and right

SEE **IDEA MAPPING**, PAGE 8

Science Writer Explains Why You Should (Or Shouldn't) Talk to Journalists

By Colleen Labbe

For many scientists, the idea of talking to a reporter provokes unease. They may have had a bad experience with a reporter and are distrustful of them as a result. Or they may have had little practice and feel uncomfortable about the media and the interview process in general. Despite these misgivings, talking with the press about NIH and NIH-funded science can be an important—and rewarding—part of the job.

Ultimately, "science is advanced in open societies with a free press," said former *Nature* magazine reporter Dr. Meredith Wadman, who recently gave a keynote address at the NIAMS intramural research program's scientific retreat. "Never underestimate the power of exposure. Plus, talking to journalists looks great on your CV!" she added.

Wadman has had a distinguished career as a science journalist, writing for the *New York*

SEE **WADMAN**, PAGE 4



The NIH Record is published biweekly at Bethesda, MD by the Editorial Operations Branch, Office of Communications and Public Liaison, for the information of employees of the National Institutes of Health, Department of Health and Human Services. The content is reprintable without permission. Pictures may be available upon request. Use of funds for printing this periodical has been approved by the director of the Office of Management and Budget through September 30, 2014.

To receive alerts to our latest issue, send an email to listserv@list.nih.gov with the words "Subscribe NIHRECORD" in the message body.

NIH Record Office Bldg. 31, Rm. 5B41
Phone (301) 496-2125 Fax (301) 402-1485

Web address <http://nihrecord.nih.gov/>

Editor

Richard McManus
Rich.McManus@nih.gov

Associate Editor

Carla Garnett
Carla.Garnett@nih.gov

Staff Writers

Dana Steinberg
Dana.Steinberg@nih.gov

Belle Waring
Belle.Waring@nih.gov

The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policies of the paper and HHS.

NIH...Turning Discovery Into Health

briefs

NIAAA Hosts Workshop/Webinar on Neurobiology of Addiction, Sept. 2

On Sept. 2, the National Institute on Alcohol Abuse and Alcoholism will host a one-day workshop/webinar. The purpose is to highlight recent progress in the understanding of neuroimmune mechanisms contributing to brain function and alcohol dependence.

The workshop will be held from 8:30 a.m. to 2:30 p.m. The location is the terrace level conference room in 5635 Fishers Ln., Rockville.

The workshop will also be webcast live through the NIH Videocast site: <http://videocast.nih.gov/>. For registration information and to view the agenda, visit www.niaaa.nih.gov/news-events/meetings-events-exhibits/niaaa-workshop.

The workshop's contact person and principal organizer is Dr. Changhai Cui, program director in NIAAA's Division of Neuroscience and Behavior. Cui said it is becoming increasingly clear that alcohol and other drugs of abuse modulate neuroimmune signaling. From recent studies, neuroimmune signaling has been shown to have an important role in neurodevelopment, synaptic function and neuroendocrine function. These findings provide an important framework in understanding neuroimmune modulation's role in the neurobiology of addiction.

This workshop will bring together scientists from the alcohol research field and other fields to highlight recent science advances, identify research gaps and discuss future directions and potential collaborations.

International Expo Set, Sept. 9

The 9th International Opportunities Expo and career event, sponsored by the visiting fellows subcommittee of the NIH fellows committee (FelCom) is scheduled for Tuesday, Sept. 9 in the NIH FAES Education Center, Bldg. 10 from noon to 4:30 p.m.

The event focuses on opportunities for postdoctoral fellows and graduate students interested in pursuing international science careers. Fellows can meet and network with science and technology representatives to explore research, funding and international career opportunities. Representatives from embassies, funding agencies and globally minded science and health organizations will be on hand to answer questions and promote their programs and resources.

Whether you are in a job search or at the beginning of your training, the expo provides an opportunity to gather information you will need to help prepare for an international career.

For more information, visit https://www.training.nih.gov/international_expo_2014.

'Safe Workplaces' Photo Contest Calls for Images

Whether photography is a passion, hobby or just something you occasionally dabble in, the Office of Research Services, Division of Occupational Health and Safety invites you to help build and sustain a positive safety culture at NIH through photography. Contribute to the effort by capturing/creating and sharing an image (or up to 3 images) depicting safe workplaces or activities—laboratory workers using personal protective equipment, crossing guards on busy streets, construction workers using safety gear, etc.

DOHS will share your photos with the NIH community through safety publications, pamphlets and posters. First, second and third place photographs will be framed and prominently displayed outside the ORS office; the images also will be featured on the ORS/DOHS web site. Winners will receive recognition and a framed certificate from NIH leadership.

The submission period lasts through Friday, Oct. 31. Also new this year will be an "In-Focus! Safe Workplaces for All" table at Safety Health and Wellness Day, Wednesday, Aug. 27, where you can get flyers and find out more about the contest. To learn more about the contest, rules, panel of judges, selection process and to submit your photo, visit <http://go.usa.gov/XEzY>.

If you have questions, email ORSSafetyDay@mail.nih.gov or send written questions to NIH, OD, ORS, DOHS (Attn: NIH Mission First, Safety Always Questions), Bldg. 13, Rm. 3K04, 13 South Dr., MSC 5760, Bethesda, MD 20892-5760.

Chemist Rice Gives Daly Lecture

Dr. Kenner Rice spoke about "Medicinal Chemistry as an Enabling Art in Biomedicine" at the annual John Daly Memorial Lecture recently. Rice is chief of the drug design and synthesis section and Chemical

Biology Research Branch for NIDA and NIAAA. He presented some of his work on opioid receptor affinity ligands, unnatural opioid enantiomers (mirror image forms of the natural opiates) as drugs and research tools and the development of cyclofoxy as a PET imaging agent for opioid receptors in living primates and humans. He also described recent progress in the development of a dual anti-heroin, anti-HIV vaccine using a metabolism-resistant hapten approach.

PHOTO: KRISTEN CARRERA



nih record

NICHD, Fogarty Help Build Research Capacity in Africa

Building a sustainable research administrative environment in academic institutions in low- and middle-income countries (LMICs) is crucial to the evolution and maintenance of strong research programs in those countries. While scientific capacity in LMICs has been strengthened over time through research and research training programs, little or no attention has been dedicated to research management, something almost every research institution in the developed world finds essential to sustaining the research enterprise.

In 2012 and 2013, African research administrators, who received training through the NIH International Extramural Associates Research Development Program, organized a series of workshops to train researchers and administrators from 32 sub-Saharan African countries in all aspects of grantsmanship. The workshops took place in Kenya, Nigeria, Senegal, South Africa, Tanzania and Zambia.

These training modules were organized through the Initiative on Research and Innovation Management, a partnership program funded by the U.S. President's Emergency Plan for AIDS Relief and managed by NICHD and Fogarty. The training was designed to build expertise and capacity in research administration by providing instruction on topics such as pre-award and post-award processes, grants and financial management and ethical compliance.

The workshops provided valuable training in research management to representatives from African academic institutions having limited experience with grants policy and procedures and fiscal accountability. Dr. Regina James, director of the NICHD Office of Health Equity, noted that "the goal of this training was two-fold: first, to ensure that institutions and individuals are knowledgeable about policies, procedures and guidelines necessary to provide fiscal oversight and management of research grants, and second, to promote 'in country' leadership and dissemination of knowledge around the importance of research administration in building strong, sustainable research programs."

To help make the workshop material available to a broader audience, NICHD staff worked with the grantees to develop interactive tutorials, video presentations and PowerPoint slides, which cover the gamut of grants-related topics.



Initiative on Research and Innovation Management Tanzania workshop organizers with NICHD staff

NICHD also produced French-language materials—four tutorials along with 13 slide presentations from the workshop held in Senegal. To learn more about the training materials, visit www.researchadministrationtools.org/. —
Christine Guilfoyle



OMB's Harris Visits NIH, Meets with Leadership

NIH director Dr. Francis Collins (l) and several of his deputy directors welcomed Dr. Julian Harris, program associate director for health in the U.S. Office of Management and Budget, and several OMB staff members to NIH's campus on July 23 for a discussion in the Porter Neuroscience Research Center and lab tours in the C.W. Bill Young Bldg. The group met first in the PNRC to talk about a number of topics, including the recently launched Accelerating Medicines Partnership and Brain Research through Advancing Innovative Neurotechnologies initiatives. Then, Collins led the group on a tour of several NIAID labs with intramural scientists at the Young Center, where talks turned to research on antimicrobial resistance.

PHOTO: ERNIE BRANSON

WADMAN

CONTINUED FROM PAGE 1

Right:

Science journalist Meredith Wadman gives keynote address at the NIAMS intramural program scientific retreat.

PHOTO: RICH CLARK

Times, *Washington Post*, *Wall Street Journal* and *Fortune* magazine, in addition to *Nature*. She is currently a fellow at the New America Foundation, a Washington, D.C.-based think tank.

Wadman acknowledged that sometimes the differing perspectives of scientists and journalists can cause friction and give rise to misinterpretations or frustration. Knowing the rules of the road for talking to journalists and understanding how the media operates can reduce anxieties and facilitate better interactions.

First, she noted, it is important to remember that journalists often are given a word limit for their story and are up against a tight deadline. “Simplicity is sacred. We have to distill and we have to do it quickly. Remember that journalism is a business,” she added. She also said that what you say may be used in surprising, unexpected ways. “If you don’t want it in print, don’t say it.”

Good reporters want to get the science right, she said, and will honor any ground rules established prior to the interview. For instance, if you only want to talk on background, which means you will not be directly quoted, make sure the reporter agrees to that before you speak.

It’s also a good idea to do your due diligence before the interview, which can and should be done in partnership with your institute’s or center’s press office. Avoid judging a reporter based on the publication with which he or she is affiliated, but do take time to read his or her previous work and get a sense of the reporter’s style and overall reputation. In addition, prepare for the interview by identifying ahead of time the three or four main points you want to make and write them down in the clearest, briefest sentences possible. Your media liaison can help you do this as well.

Once you’ve done the interview and the story is published, what should you do if you aren’t happy? What if the facts are wrong or the story misinterprets what you feel is a key point? “Don’t go away mad,” said Wadman. Follow up promptly to ask for corrections and post a comment online if appropriate. Wadman cautions that there is a difference between errors of fact, which any reputable publication will correct, and a disagreement about context, nuance or emphasis, which few publications will view as needing correction.

Wadman ended her talk with a plea to intramu-



ral researchers to get involved. Quoting climate scientist Simon Lewis, who successfully elicited a retraction and apology from the London *Sunday Times* after what he felt was a distortion of his views, she reminded all that “the media dictate what most people know about contemporary scientific debates. Given the need for informed policy, scientists need to learn to better read and engage with the media landscape.”

Nominees Sought for Safety Award

The NIH “Mission First, Safety Always” Award, presented by the Office of Research Services, showcases personnel who have demonstrated leadership, innovation and involvement in their organization’s safety culture and promoted safety in the workplace. Nominations can be submitted online at <http://go.usa.gov/XPJW>.

Nominate a colleague who has demonstrated safety leadership, with examples in two or more of these areas: leadership attributes that set the nominee apart from peers; starting and/or leading a safety initiative; engaging peers and transforming the safety culture of the organization; promoting safety as an important part of your program; working to correct unsafe or unhealthful workplace conditions or hazards.

Nominations are open until Friday, Oct. 31. If you have questions, email ORSSafetyDay@mail.nih.gov or send written questions to: NIH, OD, ORS, DOHS (Attn: NIH Mission First, Safety Always Questions), Bldg. 13, Rm. 3K04, 13 South Dr., MSC 5760, Bethesda, MD 20892-5760.



At left, Dr. Ann Bonham of the American Association of Medical Colleges (l), ORWH director Dr. Janine Clayton (c) and Dr. Judith Greenberg of NIGMS discuss the bias and barriers facing women in biomedical careers. At right, co-chairs Dr. Wiley "Chip" Souba of Dartmouth and Susan Siegel of General Electric review actions that can be taken to address the situation.

PHOTOS: ROSEMARIE FILART

Leaders Point Way to Advancing Women In Biomedical Careers

What factors prevent women from climbing up the career ladder in science and medicine? What interventions can help women close the gender gap in career advancement? Participants at a recent workshop on the advancement of women in biomedical careers tackled these issues and came up with a varied menu of approaches and interventions.

The workshop was at least 7 years in the making. Prompted by the 2007 National Academies report, "Beyond Bias and Barriers, Fulfilling the Potential of Women in Academic Science and Engineering," NIH established the working group on women in biomedical careers that resulted in the support of 14 research projects on causal factors and interventions to promote careers of women in biomedical science. The investigators studied a range of obstacles facing women at all stages of the scientific pipeline and piloted steps toward solutions.

The working group, chaired by NIH director Dr. Francis Collins and Dr. Janine Clayton, director of the Office of Research on Women's Health, and its committee on research and evidence, chaired by NIGMS deputy director Dr. Judith Greenberg, recognized the growing body of literature from these and other projects. They sponsored the recent workshop, convening a small group of prominent leaders from medical and graduate schools, the private sector and professional societies and associations to identify workable strategies to improve the recruitment, retention, reentry and advancement of women in the biomedical sciences.

Collins kicked off the event by calling on participants to "take action" in academia, private

sectors and communities. He asserted that "NIH cannot support a culture that discriminates against women."

Workshop co-chair Susan Siegel of General Electric reported that "80 percent of the health care labor force is women, yet only 19 percent of hospital CEOs are women." She described steps GE has taken to advance women's careers, including workforce development programs that encourage the culture of learning and growth values. As a strategy to overcome the "gender-gap hurdle," co-chair Dr. Wiley Souba of Dartmouth emphasized the importance of leadership support and "modeling the way" for faculty.

In a keynote presentation, Dr. Ann Bonham of the American Association of Medical Colleges stressed the value of mentors, coaches and sponsors in moving women into leadership positions. In another keynote presentation, Dr. Liza Carriaga-Lo of Brown University described the need for "breaking the cycle of the disadvantaged, promoting dignity and worth, achieving structural change and facilitating society's full participation." Discussants included Dr. Regina Benjamin, former U.S. surgeon general, along with other prominent leaders.

For women of color, "fitting into" an academic culture can be especially problematic, noted Morehouse School of Medicine's Dr. Sandra Harris-Hooker. Key pressure points include enabling work-life balance and offering proactive leadership support. Yet, one-size-fits-all solutions are not likely to be effective, noted Dr. Hannah Valentine, NIH's chief officer for scientific workforce diversity. Moreover, she urged, leadership must recognize the importance of the value of gender and other forms of diversity. "Institutional goodwill goes a long way," she added. ①

Valentine Addresses Diversity Workshop

Dr. Hannah Valentine, NIH chief officer for scientific workforce diversity, spoke at a workshop organized by the NIH program leadership committee titled "Who's In Your Portfolio—Building a Stronger Program through Diversity." The workshop explored approaches and strategies for engaging the broader extramural program community in NIH's efforts to promote a diverse biomedical/behavioral workforce and presented perspectives on how diversity promotes stronger research and training programs. The workshop was held July 8, 10 and 29 in Bldg. 31.

PHOTO: ERNIE BRANSON



MARIJUANA

CONTINUED FROM PAGE 1

Right:

"The problem with pot medicalization is the public infers that marijuana use is not associated with significant or lasting harm," said Huestis.

PHOTOS: ERNIE BRANSON

using marijuana in the past year, according to a survey by the Substance Abuse and Mental Health Services Administration. But is cannabis consumption safe?

"We know there are therapeutic benefits, but we haven't been able to separate the psychoactive effects from the therapeutic benefits," said Huestis at a July 22 lecture titled, "Marijuana: From the Street to the Clinic." The talk was sponsored by NCCAM and the NIH natural products special interest group.

Effects on the Brain

Marijuana comes from the *Cannabis sativa* plant, which for thousands of years has been valued for its medicinal and euphoric effects. Today we know that cannabis contains more than 530 chemicals, including 109 cannabinoids, explained Huestis. THC binds to cannabinoid receptors throughout the brain and affects all aspects of brain function, including executive function (paying attention, memory and learning, decision-making); emotion, coordination and motor control, appetite and pain sensation. Smoking or inhaling marijuana sends a concentrated dose into the lungs and quickly releases THC into the brain, causing a rapid onset of effects.

Recent surveys show that the perceived danger of using marijuana is down among adolescents. Yet studies reveal that marijuana negatively affects brain development and is associated with decreased IQ, especially in kids who start using pot when they're younger than 15. Huestis said persistent marijuana use from childhood to middle age can cause significant neurological decline.

In one study of adult chronic daily marijuana smokers conducted by Huestis and her team, 28 men and women ages 19-38 abstained from marijuana in a closed clinical setting. Blood and urine samples were collected daily.

"The data rocked the toxicology world," said Huestis. Within 19 hours, 13 people tested negative. Of the 15 people who tested positive for THC after the first test, all but 5 had 1 or more blood samples come up negative and then turn positive days later. In fact, more people tested positive on day 5 than on day 4.

"We in the field had really underestimated the cannabinoids that build up in people," said Huestis. "What you have is this slow release of THC from the tissues and it goes on for a very long period in chronic, frequent smokers."



In this study, interestingly, the 5 people whose blood tested THC-positive during the first 7 days were all women and urine tested positive 6 days longer in women than in men. "This [study] is critical for treatment programs because you have people assuming that if someone is still positive, they're actually still using the drug, but we show they stay positive for long periods of time."

Huestis described measuring cannabinoid (CB) receptor density in the brain of these individuals when they first entered the research unit and after 28 days of sustained abstinence. Her team found significantly reduced density of CB receptors in specific brain regions known to be important areas where marijuana has effects. After 28 days with no marijuana, the receptor density returned to normal, showing chronic, frequent smokers have effects of marijuana long after their last use due to the large body burden of THC.

Studies show conflicting results about lasting cognitive impairments from marijuana use. In some studies, the heaviest users have irreversible loss of cognitive performance. Other studies show impairment for more than a week but then cognitive function improved or returned to normal after a month. In a recent NIDA-NIMH collaborative study of infrequent marijuana smokers, THC could be found in the blood a month later in some participants.

Driving While Stoned

If THC can remain in the body after 30 days of abstinence, "this creates a huge problem with driving under the influence," said Huestis. Multi-site studies over the past decade have shown an increased risk of car crashes if THC is at all measurable in the body. Her studies found significant psychomotor impairment in chronic daily marijuana users that lasted at least 3 weeks after sustained abstinence from the drug.

What will happen on the road if marijuana becomes legal in other places? In Colorado, the chief toxicologist reported a 25 percent increase

in driving under the influence of marijuana cases in the first 6 weeks after the drug's legalization.

Huestis and colleagues are currently studying the effects of marijuana with and without low-dose alcohol in the National Advanced Driving Simulator at the University of Iowa. Data are being analyzed to gauge the effects of marijuana on decision-making, divided attention, concentration, reaction time and vehicle control, among other parameters—all integral abilities for safe driving.

Medical Marijuana

But the news is not all negative. Marijuana does have therapeutic benefits. CB receptors are the most common G-protein coupled receptors present in the brain, offering many therapeutic targets. Some of the most promising applications are to ease pain in cancer patients, relieve neuropathic pain and spasms in multiple sclerosis and reduce vomiting following cancer medications. For more than a decade, scientists have been studying marijuana's potential to help treat severe nausea, inflammation, seizures and glaucoma and to manage symptoms associated with AIDS and other diseases. Currently, a new cannabis-based extract nasal spray to relieve cancer pain is in phase 3 clinical trials.

"The problem with pot medicalization is the public infers that marijuana use is not associated with significant or lasting harm," said Huestis. Meanwhile, the composition and purity of active components can vary and often don't meet Food and Drug Administration standards, she said. While Huestis said she supports research on therapeutic uses, she advocates using purified, FDA-approved compounds that are dispensed properly to meet therapeutic standards and said an alternate administration route other than smoking is needed.

With the increased availability and potency of marijuana come increased health and accident risk. Yet more people are becoming desensitized to the dangers of cannabis use. Huestis advocates for more defined behavioral and biological markers of impairment, improved public education about marijuana's risks and more science-based drug legislation.

"Where I hope we can go is a much more balanced approach," said Huestis. "We need to enable and expand cannabinoid research on many different effects in the body—neurocognitive, psychomotor, reproductive and genetic. We [also] need well-controlled research on the potential therapeutic benefits to develop safe, effective medications and delivery systems and enable availability of efficacious medications to legitimate patients." 📍



At left, EPA's Justina Fugh mixes humor with straight talk about the responsibilities of federal employees engaging in outside activities, such as serving on boards. "If you're confused, ask your ethics office first," she advised. At right, with their spoof of the Johnny Cash ballad *I Walk the Line*, NIEHS director Dr. Linda Birnbaum and ethics chief Bruce Androphy set the tone for the fast-paced program.

PHOTOS: STEVE MCCAWE

NIEHS Laughs Its Way into Ethical Compliance

NIEHS recently held its fifth annual Ethics Day with a refreshing mix of tunes, funny yet instructional videos, good-natured competition and serious talk about ethical conduct.

"It is really a very special way for us to come together and focus on some ethics issues and have some fun," said NIEHS and NTP director Dr. Linda Birnbaum. "We are the only institute at NIH to have such an event, and it has been cited by [NIH principal deputy director] Dr. Larry Tabak as a best practice."

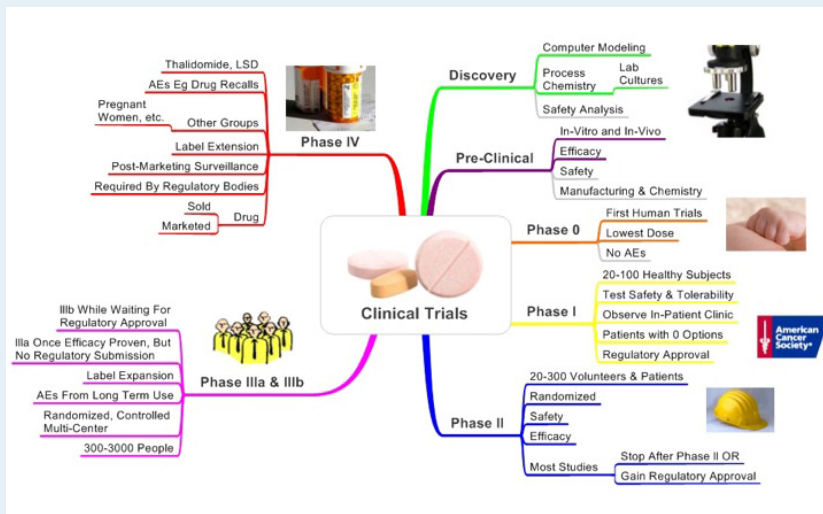
Birnbaum and Bruce Androphy, head of the NIEHS Ethics Office, opened the program with an Ethics Day tradition—a song with original, ethics-oriented lyrics, sung to the tune of Johnny Cash's *I Walk the Line*. The ditty ended with a comic reference to the deadline for filing the annual financial disclosure, Office of Government Ethics Form 278—"Cause I'm on time, I pay no fine."

They continued another tradition with the Ethics Quiz Bowl, dividing the audience into teams that competed for points—not prizes—by answering questions about government ethics.

The first keynote speaker, Justina Fugh, senior counsel for ethics at the Environmental Protection Agency, built her presentation around "Ethical Rules of the Road," using a traffic metaphor to discuss rules governing participation in outside activities in official vs. personal capacities.

Fugh seasoned her talk with humor, but her message was important—"Stay in your own lane, signal your intentions clearly and consult with your ethics officials."

The second keynote was given by NIH deputy director for science, outreach and policy Dr. Kathy Hudson, who spoke via video on "NIH Ethics and Policy Priorities." She described the NIH response to ongoing ethical controversies over the protection of human subjects in the famous HeLa cell line case and the standard of care in clinical trials. She also outlined NIH efforts to reform the Common Rule for the Protection of Human Subjects in Research, to meet the unprecedented ethical challenges posed by 21st century developments and technological advances in biomedical research such as modern genomic technology.—Eddy Ball



IDEA MAPPING

CONTINUED FROM PAGE 1

Nast provided an example of an idea map (above) and showed a slide of a hand-made map (right) during her talk at NIH.

PHOTOS: BILL BRANSON

hemispheres function differently. The areas of dominance in the left hemisphere include: logic, listing, linearity, words, numbers, analysis and sequence. The areas of dominance in the right hemisphere include: color, rhythm, imagination, day dreaming, spatial and gestalt. Idea mapping leverages both sides of the brain. The combination of left plus right increases creativity.

An idea map has many benefits:

- The color and imagery increases recall.
- You can be both creative and analytical at the same time.
- Idea maps give a big picture overview as well as the connections between information and various data points.
- Idea maps can simplify and clarify large amounts of complex data.
- You can capture thoughts as they come to mind rather than being trapped into chronological thinking.

All idea maps begin with an image (or word/image combination) at the center of a blank piece of paper. Every idea map includes lines that radiate outwards. Lines that connect to the central image are called “main branches” and associate directly to the central image. Lines that connect to main branches are called “sub-branches.”

Next, Nast shared some guidelines for creating an idea map. The map should feature both words and images. Main branch lines should be thicker than sub-branch lines.

Before beginning, it’s important to define the idea map’s purpose, Nast said. The purpose of the map will determine many things including:

- It’s hard to know when to stop generating ideas if there’s no well-defined purpose. “If I define my purpose, it’s easier for me to see when I come to a stopping point,” she explained.

- Whether or not to use color. If recall is an important part of the purpose, then use color. If capturing information quickly is a main purpose, then switching colors is a waste of time.

- The level of detail included in the map.
- Drawing the map by hand or using software.

Once the central image is well-defined, Nast advised writing down what comes to mind on the main branches and sub-branches. Based on individual associations, idea maps look different from person to person.

As an example, Nast asked the audience to write down the first 10 words that came to mind when they thought of the word “run.” Groups of four estimated how many times out of 10 all four of them would have an identical word (i.e. four-of-a-kind). On average, groups guessed there would be 3-4 occurrences. Because of the associative nature of our brain, there was only one group of four out of nearly 400 participants that had one four-of-a-kind. Most people think they have more in common with other people than they actually do, Nast ventured.

“Out of our own experiences, we have associations that we make,” she said. “I call these blooms of associations because it hubs around a single idea and those 10 words all somehow relate to the word ‘run’ in this case.”

People who haven’t created idea maps may have trouble at first. Determining what goes on the main branch and what goes on the sub-branch can be tricky, Nast noted.

“When I first started using idea maps, there was no hierarchy to my thinking. My ideas were all equal,” Nast said. “By training myself to think about the high level and then the sub ideas, I changed the way I think.”

Nast closed by challenging all in attendance to create their own idea maps. 🎯

digest



Genome-based studies have dominated the science headlines recently.

NIH Scientists Find Six New Genetic Risk Factors for Parkinson's Disease

Using data from more than 18,000 patients, scientists have identified more than 2 dozen genetic risk factors involved in Parkinson's disease, including 6 that had not been previously reported. The study, published in *Nature Genetics*, was partially funded by NIH and led by scientists working in NIH laboratories.

"Unraveling the genetic underpinnings of Parkinson's is vital to understanding the multiple mechanisms involved in this complex disease, and hopefully, may one day lead to effective therapies," said Dr. Andrew Singleton, a scientist at the National Institute on Aging and senior author of the study.

Singleton and his colleagues collected and combined data from existing genome-wide association studies, which allow scientists to find common variants, or subtle differences, in the genetic codes of large groups of individuals. The combined data included approximately 13,708 Parkinson's disease cases and 95,282 controls, all of European ancestry.

The investigators identified potential genetic risk variants, which increase the chances that a person may develop Parkinson's disease. Their results suggested that the more variants a person has, the greater the risk—up to three times higher—for developing the disorder in some cases.

Affecting millions of people worldwide, Parkinson's disease is a degenerative disorder that causes movement problems, including trembling of the hands, arms or legs, stiffness of limbs and trunk, slowed movements and problems with posture. Over time, patients may

have difficulty walking, talking or completing other simple tasks. Although nine genes have been shown to cause rare forms of Parkinson's disease, scientists continue to search for genetic risk factors to provide a complete genetic picture of the disorder.

TCGA Researchers Identify Four Subtypes of Stomach Cancer

Stomach cancers fall into four distinct molecular subtypes researchers with The Cancer Genome Atlas (TCGA) Network have found. In the study, published online July 23 in *Nature*, the scientists report that this discovery could change how researchers think about developing treatments for stomach cancer, also called gastric cancers or gastric adenocarcinomas.

Instead of considering gastric cancer as a single disease, as has been done in the past, researchers will now be able to explore therapies in defined sets of patients whose tumors have specific genomic abnormalities. Stomach cancers are a leading cause of cancer-related mortality worldwide, resulting in an estimated 723,000 deaths annually.

Previous attempts to examine the clinical characteristics of gastric cancer were hindered by how differently cancer cells can look under a microscope, even when from the same tumor. The researchers hope that the new classification system will serve as a valuable adjunct to the current pathology classification system, which has two categories: diffuse and intestinal.

Common Gene Variants Account for Most Genetic Risk for Autism

Most of the genetic risk for autism comes from versions of genes that are common in the population rather than from rare variants or spontaneous glitches, researchers funded by NIH have found. Heritability also outweighed other risk factors in this largest study of its kind to date.

About 52 percent of the risk for autism was traced to common and rare inherited variation, with spontaneous mutations contributing a modest 2.6 percent of the total risk.

"Genetic variation likely accounts for roughly 60 percent of the liability for autism, with common variants comprising the bulk of its genetic architecture," explained Dr. Joseph Buxbaum of Icahn School of Medicine at Mount Sinai, New York City. "Although each exerts just a tiny effect individually, these common variations in the genetic code add up to substantial impact, taken together."

Buxbaum and colleagues of the Population-Based Autism Genetics and Environment Study Consortium reported on their findings in a unique Swedish sample in the journal *Nature Genetics*, July 20.

NIH System To Monitor Emerging Drug Trends

An innovative National Drug Early Warning System (NDEWS) is being developed to monitor emerging trends that will help health experts respond quickly to potential outbreaks of illicit drugs such as heroin and to identify increased use of designer synthetic compounds. The system will scan social media and web platforms to identify new trends as well as use conventional national- and local-level data resources.

The University of Maryland's Center for Substance Abuse Research will receive 5 years of funding from the National Institute on Drug Abuse to develop NDEWS.

"NDEWS will generate critically needed information about new drug trends in specific locations around the country so rapid, informed and effective public health responses can be developed precisely where needed," said NIDA director Dr. Nora Volkow. "By monitoring trends at the local level, we hope to prevent emerging drug problems from escalating or spreading to surrounding regions."



NHLBI's Dr. David Gordon

HHS Honors NHLBI's Gordon

Dr. David Gordon, associate director of the Prevention and Population Sciences Program in NHLBI's Division of Cardiovascular Sciences, recently received the HHS Career Service Award honoring 40 years of outstanding achievement.

Since joining NHLBI in 1984, Gordon has played a key role in several seminal NHLBI cardiovascular trials that have transformed the practice of medicine, including WAVE, BARI-2D, ALLHAT and AIM-HIGH. He was also a member of all of the Adult Treatment Panel cholesterol guideline committees.

In 2002, he was appointed special assistant for clinical studies in the Division of Heart and Vascular Diseases, with oversight responsibilities for all clinical trials in the division. While in this role, he has been active in the management of current NHLBI trials and networks and served two terms as acting deputy division director. He was also a co-author of the 2013 cholesterol guidelines.

Gordon has become an internationally recognized thought leader in the field of cardiovascular trials. He is a primary organizer of the acclaimed annual Paris Cardiovascular Clinical Trials Forum and Workshop. His recent publications cover a variety of topics, issues and methods related to randomized trials in cardiovascular medicine.

In November 2013, Gordon was the lead author of a paper in the *New England Journal of Medicine* on publication of NHLBI-supported clinical trials. He and his colleagues found that 45 NHLBI-supported cardiovascular clinical trials that focused on primary clinical endpoints such as death, myocardial infarction, strokes and hospitalizations published their results very quickly (<18 months) and were highly cited, but that the remaining 199 trials that focused on surrogate endpoints, published slowly if at all and were rarely cited. The finding that many NHLBI-funded trials have little scientific impact, while a few were transformative, has profoundly shaken our paradigm of funding clinical trials. In June 2013, based in part on this article, Gordon was asked to join a trans-NIH working group on fostering improvement in clinical trials.

Brazhnik Named NIGMS Branch Chief

Dr. Paul Brazhnik was recently named chief of the Bioinformatics and Computational Biology Branch in the NIGMS Division of Biomedical Technology, Bioinformatics and Computational Biology. Before becoming its chief, Brazhnik was a program director in this branch and managed a portfolio in computational systems and mathematical biology. He came to NIH in 2009 from Virginia Tech, where he was a faculty member in the department of biological sciences and in the Virginia Bioinformatics Institute. Brazhnik earned an M.Sc. in physics and a Ph.D. in theoretical and mathematical physics from Moscow State University in Russia.



Research Chemist Hall Mourned

Clara Hall, 83, a research chemist at NIH for 40 years before retiring in 1999, died on May 28.

She came to NIH in 1959 and for many years was associated with the laboratory of Dr. Elizabeth Neufeld of the National Institute of Arthritis, Metabolism and Digestive Diseases, now NIDDK. Neufeld spoke at Hall's funeral June 5 in Washington, D.C.

Clara E. Walke Hall was a classically trained pianist and cellist. She received a B.S. in chemistry from Hunter College. She was a research scientist at Columbia University College of Physicians and Surgeons prior to joining NIH.

In the early 1960s, Hall began tutoring inner-city elementary school students. She continued for 10 years, then returned to tutoring after retiring from NIH.

Hall was an avid tennis fan and a regular attendee at the U.S. Open. She also enjoyed travel and attending symphony and ballet performances at the Kennedy Center.

Hall is survived by daughter Karen Hall of Gaithersburg, son Geoffrey Hall of New York City, two grandchildren and two great-grandchildren. 🍷



feedback

Have a question about some aspect of working at NIH? You can post anonymous queries at www.nih.gov/nihrecord/index.htm (click on the Feedback icon) and we'll try to provide answers.

Feedback: Once again, the NIH R&W is advertising a raffle for tickets to a game of the professional football team in Washington, D.C. Given NIH's commitment to diversity and inclusion, as well as its stated desire for a workplace free from discrimination, why is the R&W allowed to hold this raffle? Will it take someone to file an EEO complaint against the R&W and the NIH director to stop this? The U.S. Patent and Trademark Office has again ruled the word "R-skin" is derogatory and every major civil rights organization in the U.S. has stated the same. Even the President, our boss, has said the name should be changed; yet this is allowed. Why?

Responses from R&W and ORS: "I personally do not like the name," said R&W President Randy Schools. "When we get tickets, they say R-skin. Also, over the past 20 years, the players and alumni have raised over \$1 million for Camp Fantastic and Friends of the Clinical Center. They introduce themselves as playing for the team. The major media—*Washington Post*, WTOP, Channels 4, 5, 7, 9—still call them the R-skins. Staff still want tickets, that's for sure. I dearly hope they change the name, but until they do so, it will be difficult."

Observes Tim Tosten of ORS, "The NIH Recreation and Welfare Association is a non-NIH entity that has a use agreement to use the NIH space to provide services to the NIH community such as employee stores, ticket sales, movie rentals, fitness centers, etc. Through our agreement with the R&W, they are entitled to sell to their customers the sporting tickets that they own, including those for Washington's NFL team. If it is determined that the name is to be changed, then the R&W will advertise the sale/auction of the tickets using the new name."

Feedback: The secure email web site that we use to communicate with [Clinical Center] patients is not user friendly for our patients. Patients do not like to use it. It would seem reasonable for us to communicate with them via a messaging system in CRIS or through the patient portal. Are there any plans for this to take place?

Response from the Clinical Center: Secure communication between patients and physicians is becoming an increasingly popular means by which information can be exchanged in an efficient manner. Such communication is governed by the Privacy Act, which requires the use of encrypted email in communications with patients to protect the confidentiality of their medical information. In July 2013, the Clinical Center implemented a patient portal offering patients the opportunity to review sections of their electronic medical record as well as to have access to key information about NIH and the Clinical Center. A future release will include secure messaging functionality to allow for a confidential exchange between patients and their research team. This functionality is expected to be available in 2015.



At the recent congressional briefing are (from l) NICHD director Dr. Alan Guttmacher, Dr. Yvonne Maddox, Dr. Regina James, Dr. Jack Yanovski and Dr. Shavon Artis.

PHOTO: CHRISTINE M. ROGERS

Friends of NICHD Host Capitol Hill Briefing On Health Disparities

The Friends of NICHD sponsored a congressional briefing, "Celebrating the Career of Dr. Yvonne Maddox: Spotlight on Disparities Research," recently. The event was held to recognize Dr. Yvonne Maddox, who served as deputy director of NICHD for 19 years. In April, she was appointed acting director of the National Institute on Minority Health and Health Disparities by NIH director Dr. Francis Collins.

The briefing highlighted NICHD's work in health disparities, one of Maddox's greatest areas of interest and passion during her career at NICHD. Speakers included NICHD director Dr. Alan Guttmacher; Dr. Jack Yanovski, chief, section on growth and obesity, Program on Developmental Endocrinology and Genetics; Dr. Regina James, director, Office of Health Equity; and Dr. Shavon Artis, coordinator, Safe to Sleep campaign.

Attendees included members of the Friends of NICHD and staff from 10 congressional offices, such as Rep. Nita Lowey (D-NY), Rep. William Enyart (D-IL) and Rep. Mike Honda (D-CA). Rep. Rosa DeLauro (D-CT) hosted the briefing on behalf of the Friends of NICHD.

The Friends of NICHD is an independent consortium of more than 100 scientific, advocacy and consumer groups that have a particular interest in the programs and mission of NICHD. The group works to coordinate activities in the legislative and executive arenas that support NIH.



Helping fill the truck at left are (from l) Corey Welcher, John Veitch, Kian Memarzadeh, Nancy McLean-Cooper and Rodelyne Augustin. Above is Delonte Stephens of the NIH Fire Department.



Packing food above are (from l) Mike Pallatucci of the NIH Fire Department, Conor O'Shaughnessy of NIDCR and Capt. Paul Donaldson of the NIH Fire Department. Below are (from l) O'Shaughnessy and ORS's Nita Them and Mosen Zibaii.

Feds Feed Families

NIH Helps Knock Out Hunger in 2014

For the sixth consecutive year, NIH has been a strong competitor in the friendly government-wide competition Feds Feed Families, which collects nonperishable food items and toiletries during the summer months. Between the months of June and August, NIH staff has willingly held signs, donated goods and spread the word about the program. In 2013, NIH contributed a little over 15,000 pounds of non-perishable goods to the program's grand total of 9 million pounds of donations. Once again, the Office of Research Services is coordinating the program for NIH.

ORS gathers donations from 44 locations both on and off campus and records the weights of all non-perishable donations from staff outside of Bethesda, including NIH offices in Frederick and Baltimore, Montana (RML) and North Carolina (RTP). The local donation collection staff is composed of employees from ORS's Division of Scientific Equipment and Instrumentation Services; this year they have been very busy. The NIH coordinator, Corey Welcher, is happy to report a total of 8,000 pounds in the collection as of the end of July.

"This year we've tried to keep NIH informed of our progress via the Program and Employee Services Twitter

page (@NIHEmplSrvcs) and teaming up with more ICs located outside of the Bethesda campus to spread the word," she said. "Each year it keeps growing."

New to the program this year is a local collaboration—a portion of all donations will be distributed to the Edmond J. Safra Family Lodge and the Children's Inn at NIH, as they too experience bare pantries in the summer. The remainder will be sent to the Capital Area Food Bank for distribution within D.C., Maryland and Virginia.

During the month of August, the team will be promoting "Two Can Tuesday" to encourage folks to bring in donations each Tuesday. Additionally, four "Fill the Truck" events will be held in front of Bldg. 1 to allow for staff to walk/drive/bike up to the truck to drop off their donations.

NIH'ers are urged to support the program as they are able, even just by spreading the word. You may also tweet pictures of what your offices are donating using #NIHKnocksOutHunger. Every effort is appreciated. The program will have its grand finale at the NIH Safety Health and Wellness Day in Natcher Bldg.'s Kirschstein Auditorium on Aug. 27. 🍎

Wednesday Afternoon Lectures Resume

The 2014-2015 Wednesday Afternoon Lecture Series kicks off a new season on Wednesday, Sept. 3 with Dr. Andrew P. Feinberg of Johns Hopkins University School of Medicine speaking on "The Epigenetic Basis of Common Human Disease." All lectures will be held at 3 p.m. in Masur Auditorium, Bldg. 10.

To learn more about the speakers coming to campus this year, visit <http://wals.od.nih.gov>. You can view the entire 2014-2015 Wednesday Afternoon Lecture Series schedule there as well as download the season's poster. For day-of event information, follow WALs on Twitter, @NIHWALS. For any questions or requests, contact Jacqueline Roberts at robertsjm@od.nih.gov or (301) 594-6747.

